

WHAT IS CLAIMED IS:

1. A radio frequency (RF) tuner comprising:
a tuner housing;
a cover coupled to a first side of said housing; and
a tuner printed circuit board (PCB) including a plurality of layers coupled to a second side of said housing;
wherein said layers are configured to shield said tuner PCB.
2. The RF tuner of claim 1, wherein said tuner PCB further comprises:
a plurality of finger connector extrusions formed in said tuner PCB;
said connector extrusions being configured to electrically couple said tuner PCB to a second PCB.
3. The RF tuner of claim 2, wherein said tuner further comprises a vertical mount tuner.
4. The RF tuner of claim 1, wherein said tuner housing further comprises:
a plurality of support members;
a plurality of extrusions, said extrusions being configured to extrude through a plurality of corresponding orifices in said tuner PCB; and
a plurality of ribs configured to receive a corresponding plurality of clip tabs of said cover.
5. The RF tuner of claim 1, wherein a bottom layer of said plurality of layers comprises a solid ground plane configured to form a shield.
6. The RF tuner of claim 1, further comprising a network connector communicatively coupled to said tuner PCB.

7. The RF tuner of claim 6, wherein said network connector comprises a coaxial cable connector.

8. The RF tuner of claim 1, wherein said tuner PCB further comprises:
a top layer, said top layer including a plurality of tuner components;
an intermediate layer, said intermediate layer including a major ground plane having a number of signal paths and direct current (DC) voltage lines; and
a bottom layer, said bottom layer including a total ground plane.

9. The RF tuner of claim 8, wherein said tuner PCB is coupled to said tuner housing adjoining said top layer and said housing.

10. The RF tuner of claim 8, further comprising a plurality of plated through holes disposed in said top layer, said intermediate layer, and said bottom layer.

11. The RF tuner of claim 8, wherein said tuner PCB further comprises:
a plurality of finger connector extrusions formed in said top layer, said intermediate layer, and said bottom layer;
said connector extrusions being configured to electrically couple said tuner PCB to a second PCB.

12. The RF tuner of claim 11, wherein said second PCB comprises a main PCB of a set-top box.

13. The RF tuner of claim 8, wherein said tuner components comprise:
an up-converter variable crystal oscillator (VCO); and
a down-converter VCO.

14. A set-top box comprising:
a chassis;
a tuner coupled to said chassis;

a demodulator communicatively coupled to said tuner; and
a central processing unit (CPU) communicatively coupled to said demodulator;
wherein said tuner includes a tuner housing, a cover coupled to a first side of said housing, and a tuner printed circuit board (PCB) including a plurality of layers coupled to a second side of said housing, wherein said layers are configured to shield said tuner PCB.

15. The set-top box of claim 14, wherein said tuner further comprises:
a plurality of finger connector extrusions formed in said tuner PCB;
said connector extrusions being configured to electrically couple said tuner PCB to a second PCB.

16. The set-top box of claim 15, wherein said second PCB comprises a main PCB of said set-top box.

17. The set-top box of claim 14, wherein said tuner further comprises a vertical mount tuner.

18. The set-top box of claim 14, wherein said tuner housing further comprises:
a plurality of support members;
a plurality of extrusions, said extrusions being configured to extrude through a plurality of corresponding orifices in said tuner PCB; and
a plurality of ribs configured to receive a corresponding plurality of clip tabs of said cover.

19. The set-top box of claim 14, wherein said tuner PCB further comprises:
a top layer, said top layer including a plurality of tuner components;
an intermediate layer, said intermediate layer including a major ground plane having a number of signal paths and direct current (DC) voltage lines; and
a bottom layer including a total ground plane.

20. The set-top box of claim 19, further comprising a plurality of plated through holes disposed in said top layer, said intermediate layer, and said bottom layer.

21. The set-top box of claim 19, wherein said tuner components comprise:
an up-converter variable crystal oscillator (VCO); and
a down-converter VCO.

22. A method of assembling an RF tuner comprising:
coupling a tuner printed circuit board (PCB) to a first side of a tuner housing; and
coupling a tuner cover to a second side of said tuner housing;
wherein said tuner PCB includes a plurality of layers configured to shield said tuner PCB.

23. The method of claim 22, wherein said coupling a tuner PCB to a first side of a tuner housing comprises:
inserting a plurality of extrusions of said tuner housing through a plurality of corresponding orifices in said tuner PCB; and
performing a solder reflow process on said plurality of extrusions.

24. The method of claim 23, further comprising:
inserting a plurality of RF tuner components through said tuner PCB; and
securing said plurality of RF tuner components to said tuner PCB using said reflow process.

25. The method of claim 22, further comprising:
forming a plurality of finger connector extrusions in said tuner PCB;
said connector extrusions being configured to electrically couple said tuner PCB to a second PCB.

26. The method of claim 22, wherein said coupling a tuner cover to a second side of said tuner housing further comprises:

forming a plurality of ribs in said tuner housing;
forming a plurality of clip tabs in said cover; and
inserting said plurality of clip tabs into said ribs to form an interference fit.

27. A method of forming a tuner printed circuit board (PCB) comprising:
forming a top layer of said tuner PCB including coupling a plurality of tuner components;

forming an intermediate layer of said tuner PCB, said intermediate layer including a major ground plane having a number of signal paths and direct current (DC) voltage lines formed therein; and

forming a bottom layer of said tuner PCB including a total ground plane.

28. The method of forming a tuner PCB of claim 27, further comprising:
forming a plurality of finger connector extrusions in said tuner PCB;
said connector extrusions being configured to electrically couple said tuner PCB to a separate PCB.

29. The method of forming a tuner PCB of claim 27, further comprising:
forming a plurality of plated through holes in said top layer, said intermediate layer, and said bottom layer;
said plated through holes corresponding to said plurality of tuner components.

30. The method of forming a tuner PCB of claim 29, wherein said tuner components comprise:
an up-converter variable crystal oscillator (VCO); and
a down-converter VCO.